A STUDY OF IMPACTS OF INFORMATION TECHNOLOGY INVESTMENT ON ORGANIZATIONAL OUTCOMES IN INDIAN CONTEXT

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ABSTRACT

Businesses have been spending huge sums of money on computers, software, and other related expenses as a major part of their Information Technology (IT) investment for many years. This trend has been going on for past three decades in US and has caught up with India as well in recent times. Though IT sector has been driving the GDP growth of India for past decade, IT adoption in many segments of Indian industry still remains a recent phenomenon. Even though IT investments have increased considerably, the impact of IT investments on organizational outcome variables remains tenuous. Prior research also notices a varying range of performance outcomes of IT investments among different firms. This has been attributed to contingent effect of IT investment by Information Systems (IS) researchers. Thus, using IT to enable a firm to achieve the desired organizational change and reaping benefits thereof still remains a challenge for managers.

Prior studies have documented several financial, operational, strategic, administrative, and other benefits of IT investment. It is very important for organizations to find out which of these benefits are realised later. Research related to the impact of IT investment in Indian context is very limited. In view of the importance of the research in this field and the existing research gap, this study explores the impact of IT investment on Indian firms. Specifically, the study focuses on the impact of IT investment on three organizational variables that are cost of operations, profit, and capital productivity. Following the contingency theory perspective, these relationships are also examined in presence of contingent contextual variables like firm age, export activity, firm ownership, financial leverage, sales growth, industry competitiveness, board independence, foreign ownership, management remuneration, and absorptive capacity.

The current research adopts quantitative research methodology to address its objectives. The relationships are tested and analyzed using structural equation modelling (SEM) technique. The data of Indian firms covering the period of 2007-2010 have been used in this study.

Results of the study reveal that Indian firms are yet to achieve some of the well-popularised benefits of IT. It was found that IT investment has helped Indian firms in reducing cost of operations, but firms have witnessed drop in profit and capital productivity. Firms in early period of their life benefit more from IT in reducing their cost of operations and firms in operation for a relatively long period benefit more from IT in increasing their profit. Firms with relatively higher exports benefit more from IT in increasing their profit and improving their capital productivity and firms with relatively low exports benefit more from IT in reducing their cost of operations. State-owned enterprises (SOE) benefit more from IT in reducing their cost of operations as compared to privately-owned enterprises (POE) and foreign-invested enterprises (FIE). SOEs, FIEs, and POEs benefit from IT in improving their profit in that increasing order. Firms with relatively high debt levels benefit less from IT in reducing their cost of operations. Firms with relatively high sales growth benefit less from IT in reducing their cost of operations. Firms, which operate in a relatively more competitive industry benefit more from IT in reducing their cost of operations, and firms, which operate in a relatively less competitive industry, benefit more from IT in increasing their profit. Time to realize the benefits from IT investment has come down to 1 year from 2-3 years. Finally, evidence obtained in this study suggests that impact of IT can be either context-dependent, or context-independent depending on the organizational outcome under consideration for impact.

The contribution of this study lies in presenting the 'IT impact model' considering both direct and indirect time-lagged effects of IT investment on some key but related

organizational variables simultaneously and evaluating the relationships among the variables in the models. The study also contributes by investigating the role of various contextual variables on realizing payoffs from IT investment and thus extends the IT impact theory. The study is set in India and adds to the scarce research in an emerging economy in this domain of IS research.

The findings of this study highlight the wide gaps that exist between theory and practice in achieving IT benefits, such as profitability and productivity gains. The results point out that Indian firms are yet to achieve some of the well-popularised benefits of IT. This study presents them some managerial tasks to contend.

Keywords: IT investment, IT impact, Contingency theory perspective, Structural equation modelling, Indian firms.

TABLE OF CONTENTS

PAGE

LIST OF TABLES

PAGE

LIST OF FIGURES

PAGE